

Appln. No. 09/818,765
Amendment After Final Rejection filed January 5, 2005
Response to Office Action dated August 5, 2004

REMARKS

Claims 2-4 and 11-15 are pending in this application and stand rejected. Claims 2-4, 14 and 15 are independent.

By this Amendment After Final Rejection Applicants seek to add claims 16-20. The claims provide, generally, for pressing of the ink bag to discharge at least some ink through the second opening that is an ink supply port. Support for these claims can be found throughout the application as filed, for example, in Fig. 14, and at pages 16-17 of the specification.

The Rejections Under 35 U.S.C. § 103(a)

Claims 2-4 and 11-15 have been rejected under 35 U.S.C. § 103(a) as being anticipated by German Patent Appln. 34 01 071 A1 to Vollert in view of U.S. Patent No. 5,903,292 Scheffelin et al. Applicants respectfully traverse this rejection and submit the following arguments in support thereof.

Claim 2 is directed to a method of refilling a spent ink bag for use in an ink jet recorder. This is done by the steps of providing the spent ink bag, which has an ink supply port selectively engageable with the ink jet recorder, positioning the spent ink bag, inserting an ink needle into the ink supply port of the spent ink bag, and discharging ink from the spent ink bag only through the port. After the discharging step comes a step of charging the spent ink bag only through the port with a specified quantity of ink.

Applicants' invention, as set out in claim 3, involves a method of refilling an ink bag for use in an ink jet recorder, the ink bag having a flexible bag portion with an interior and initially filled with ink through a first opening in the bag that is sealed after the ink bag is initially filled. The method involves providing an ink bag with a second opening different than

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the first opening, the second opening being an ink supply port selectively engageable with the ink jet recorder, positioning the ink bag, and advancing a tip of an ink needle into the interior of the flexible bag portion by passing the tip of the needle through the second opening. Another step is charging the ink bag only through the second opening with a specified quantity of ink.

Claim 4 describes a method of refilling an ink bag for use in an ink jet recorder, the ink bag being initially filled with ink through a first opening in the bag that is sealed after the ink bag is initially filled, and this method includes the steps of providing the ink bag, the ink bag having, disposed on a line, the first opening and an opposing second opening that is an ink supply port selectively engageable with an ink jet recorder, positioning the ink bag, advancing a tip of an ink needle along the line and through the second opening in the ink bag, and charging the ink bag only through the second opening with a specified quantity of ink.

Applicants' invention, as recited in claim 14, also relates to a method of refilling an ink bag for use in an ink jet recorder, the ink bag having a flexible bag portion with an interior initially filled with ink through a first opening formed by a part of the flexible bag portion and which first opening is sealed after the ink bag is initially filled. Such a method includes the steps of providing an ink bag, the ink bag having a second opening formed in a port attached to another part of the flexible bag portion and that is different than the first opening, the second opening being an ink supply port selectively engageable with the ink jet recorder, positioning the ink bag and advancing the tip of an ink needle into the interior of the flexible bag portion by passing the needle tip through the second opening in the port. The ink bag is charged only through the second opening in the port with a specified quantity of ink.

Claim 15 is drawn to a method of refilling an ink bag for use in an ink jet recorder, the ink bag being initially filled with ink through a first opening formed by a part of the

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flexible bag portion and which first opening is sealed after the ink bag is initially filled. This is done by providing the ink bag, the ink bag having, disposed on a line, the first opening and an opposing second opening formed in a port attached to another part of the flexible bag portion, the second opening being an ink supply port selectively engageable with an ink jet recorder, positioning the ink bag and advancing the tip of an ink needle along the line and through the second opening in the port. The ink bag is charged only through the second opening in the port with a specified quantity of ink.

Applicants respectfully traverse the asserted combination of Vollert and Scheffelin on grounds the combination of these references would not lead one skilled in the art to the claimed invention.

When applying references in an obviousness rejection it is crucial to keep in mind all the teachings of the references, including portions that teach away from the invention as claimed. In this regard, M.P.E.P. § 2141.02 states:

**PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY,
INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE
CLAIMS**

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984) (Claims were directed to a process of producing a porous article by expanding shaped, unsintered, highly crystalline poly(tetrafluoroethylene) (PTFE) by stretching said PTFE at a 10% per second rate to more than five times the original length. The prior art teachings with regard to unsintered PTFE indicated the material does not respond to conventional plastics processing, and the material should be stretched slowly. A reference teaching rapid stretching of conventional plastic polypropylene with reduced crystallinity combined with a reference teaching stretching unsintered PTFE would not suggest rapid stretching of highly crystalline PTFE, in light of the disclosures in the art that teach away from the invention, i.e., that the conventional polypropylene

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should have reduced crystallinity before stretching, and that PTFE should be stretched slowly.).

It is also important to note that the proposed modification cannot change the way the device taught in the reference works. M.P.E.P. § 2143.01 states:

THE PROPOSED MODIFICATION CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.).

The teachings of Vollert and Scheffelin are such that the suggested combination of references is improper because, as will now be explained, that combination violates both of these requirements.

Vollert merely teaches ink cartridges each having an single ink supply port through which ink is both charged and discharged. There is no mention of any other port for ink supply or refilling.

It should be noted that the Office Action **admits** that Vollert does not disclose the ink bag is initially filled with ink through a first opening in the bag that is sealed after the bag is initially filled (Office Action, pg. 3).

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Regardless of whether Scheffelin remedies one deficiency of Vollert, filling through an **initial** fill port, Scheffelin contains teachings that lead away from the present invention, which **refills** ink through the ink supply port.

Scheffelin disparages prior art systems for refilling ink cartridge as being messy and unsatisfactory (col. 1, lines 50-65). Scheffelin states that its invention avoids these problems through "an improved structure and method for recharging the ink supply in an inkjet print cartridge" (col. 1, lines 66-67). Scheffelin goes on to specify the cartridge has both an initial fill port and a refill valve, that is, a second port which is used only for refilling (col. 2, lines 5-9). That refill valve is not located in an ink supply port through which ink would flow to a printer.

It is important to keep in mind Scheffelin is directed to a cartridge having an integral ink tank and printer head (this configuration is shown in Fig. 9). Such a cartridge cannot be said to have an ink supply port through which ink can flow to an ink jet head.

Applicants submit that one skilled in the art, after considering these two references, would be led to modify Vollert's ink cartridge structure, having a cartridge with a single ink supply port, to include the separate refill port found in Scheffelin - as noted above, Scheffelin states that its invention resides in the an improved structure and method for recharging the ink supply in an inkjet print cartridge, and specifies that the cartridge has both an initial fill port and a refill valve (which clearly is part of the refill port, not an ink supply port, as Scheffelin lacks an ink supply port). Refilling would take place through the refill port, not the ink supply port.

In summary, given Scheffelin's strong teachings, one skilled in the art would be led to modify Vollert's ink cartridge structure to include a separate refill port, as well as the ink

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supply port, and would refill that cartridge through the separate refill port, **not** the ink supply port.

Accordingly, taken together Vollert and Scheffelin teach away from the invention as set forth in the foregoing claims.

Claims 12 and 13 depend, respectively, from claims 3 and 4, and so incorporate by reference all the features of those base claims. Claims 12 and 13 therefore patentably distinguish over the cited art at least for the same reasons as already have been given for claims 3 and 4.

Newly-presented claims 16-20 respectively depend from independent claims 2-4, 14 and 15, already discussed and shown to avoid the cited art. Claims 16-20 therefore avoid that art at least for the reasons already given with regard to their parent claims.

In addition, claims 16-20 teach that the ink bag is pressed to discharge residual ink. This too is not taught in either Vollert or Scheffelin, and so for this reason as well claims 16-20 are patentable over those references.

For all the foregoing reasons, favorable consideration and withdrawal of this rejection are respectfully requested.

CONCLUSION

Applicants have made a diligent effort to place this application in condition for allowance and submit that the claims are in condition for allowance. If for any reason, however, the Examiner should deem that this application is not in condition for allowance, the Examiner is respectfully requested to telephone the undersigned attorney at the number listed below to resolve any outstanding issues prior to issuing a further Office Action.

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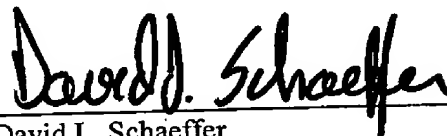
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In view of the foregoing revisions and remarks, Applicants respectfully request entry of this Amendment After Final Rejection and submit that entry of this Amendment will place the present application in condition for allowance. It is further submitted that entry of this Amendment can be approved by the Examiner consistent with Patent and Trademark Office practice, since the changes it makes should not require a substantial amount of additional work by the Examiner. It is believed that the changes presented in this Amendment either address matters of form or issues that the Examiner has previously considered.

Other than the extension fee authorized in the accompanying Petition, no fees are believed to be due. Nevertheless, the Commissioner is authorized to charge any fee now or hereafter due in connection with the prosecution of this application to Deposit Account No. 19-4709.

Prompt and favorable consideration are respectfully requested.

Respectfully submitted,



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